1993 Toxicology Outreach Panel Report

3rd Meeting of the Toxicology Information Outreach Panel

May 10, 1993
National Library of Medicine

Agenda

Call to Order and Introductions	Dr. Bailus Walker, Jr.
Welcome from the NLM Director	Dr. Donald Lindberg
Howard University Training	Dr. Robert Copeland
NIH Grantline	Dr. John James
HBCU File Usage	Ms. Cynthia Gaines
Computer- Assisted Training in Toxicology	Ms. Miriam Perkins Dr. Norbert Page
Site Visits/Interviews Report	Dr. Saundra McGuire
HBCU Update	

Members

- Dr. Bailus Walker, Jr., University of Oklahoma, *Chair*
- Dr. Melvin Spann, Chief, Biomedical Information Services Branch, National Library of Medicine
- Dr. Walter Sullivan,Morehouse School of Medicine
- Dr. Johnnie Early, Florida A & M University
- Dr. Ann Barbre, Xavier University of Louisiana
- Dr. James Webster, Tuskegee University
- Dr. Maurice Knuckles, Meharry Medical College
- Dr. Isaac Reese, King Drew Medical Center
- Dr. Wilbert Wilson, Howard University
- Dr. Edward J. Fontennette, University of Arkansas
- Dr. Henry Lewis III, Texas Southern University
- Dr. Charles Proctor, Consultant
- Dr. Saundra Y. McGuire, Cornell University
- Dr. Max Lumn, Agency for Toxic Substances and Disease Registry, Chairman
- Dr. Delbert L. Flowers, U.S. Department of Labor

Opening Remarks

The National Library of Medicine (NLM) established the Toxicology Information Outreach Panel (TIOP) in the summer of 1991 to improve the Historically Black Colleges and Universities' access to NLM's biomedical information. The TIOP consists of representatives from the Association of Minority Health Professions Schools, the National Association of Equal Opportunity in Higher Education (NAFEO), and Oak Ridge Associated Universities (ORAU), as well as two consultants and one representative from the training areas of three government agencies. NLM hosted subsequent TIOP meetings on August 15, 1991 and April 6,1992. At each meeting, the TIOP was charged with developing strategies that would better enable HBCUs to use the toxicological, environmental, and occupational resources developed by NLM. Additionally at these meetings, plans were established to assess the success of the panel thus far and to continue support of the institutions. Recommendations and future directions were also discussed.

NLM has worked with nine institutions within the nation's HBCUs to establish a training program that would demonstrate the hardware and software provided to them by NLM. The appropriate hardware and software was sent to the institutions in October 1991, and all hardware was installed and software was operational by January 1992. The user population consisted of faculty, researchers, and students.

The third TIOP meeting on May 10, 1993 focused on reports and updates from HBCU representatives. Additionally, Dr. Saundra McGuire presented the detailed findings of the evaluation of the panel's efforts. Panel members shared success stories and lessons learned during the first two years of the outreach pilot project. Reports from panel members included summaries of the process required to set up the mid-May database training at the Howard University College of Medicine, ways to access National Institutes of Health (NIH) opportunities in project research and research training, a program in computer-assisted training in toxicology, and the efforts needed to restart the Lower Mississippi Delta Project

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Meeting Topics

Howard University Database Training (MAY 11-14)

Dr. Robert Copeland

Dr. Robert Copeland, a professor and database trainer from Howard University's College of Medicine, shared with the panel the steps to be taken and the resources necessary to provide training on NLM's database at Howard University. The following had to be considered.

- A facility that could accommodate 17-20 people had to be located in order to provide adequate training space.
- How coordination with the medical department and student usage of the facility had to be considered.
- Acquisition of additional telephone lines. Parcticipant lodging, meals, and transportation had to be arranged.

Dr. Copeland reported success in that he was able to secure the Student Learning Center located within the College of Medicine. This facility is capable of training up to 30 parcticipants. Dr. Copeland also obtained alumni funding to secure the additional telephone lines. It was arranged for all parcticipants to stay at the Howard Inn, two blocks away from the training center.

Division of Research Grants, NIH GRANTLINE

Dr. John James

Dr. John James with the Division of Research Grants reported on the opportunities provided by NIH in project research and research training and support. Dr. James explained to the panel the various electronic modes of communication that the public can use to access the NIH Guide for Grants and Contracts. The two principal methods are:

- Via electronic networks to institutional hubs. Someone in the research setting must volunteer to receive

the NIH guides, indices, and directories automatically via electronic networks each time they are updated. This person would then distribute the information to local biomedical researchers.

- Via access to the NIH Grant Line, which is an electronic bulletin board (see Appendix A for instructions).

Dr. James also provided information on how to access the NIH Grant Line and discussed how HBCUs could become institutional hubs.

Computer-Assisted Training in Toxicology

Miriam Perkins, Special Assistant for Education with the special Biomedical Information Services Branch of the NLM, assisted by Dr. Norbert Page, presented information on the development of microcomputer-based courseware in toxicology. As one of the key components of the NLM database program, the development and ongoing implementation of new hardware and software will assist users in better utilizing the NLM chemical and toxicological databases. The proposed target audience for the computer-assisted training are entry-level college students. With information being delivered via microcomputers, interactive TV, or CD-ROM media technologies, the students would initially proceed in sequence through the course by self-paced instruction, voluntary learning, optional self-testing, or some type of menu-driven program. Through this courseware, students will be introduced to the basic principles of toxicology, exposure, absorption, distribution and elimination, metabolism, and cellular and biochemical reactions to foreign substances.

Ms. Perkins continued by discussing the possible units of instruction within each principle. A brisk discussion ensued when Dr. Bailus Walker suggested that Nerotox be added as a separate topic in the descriptive toxicology section. Ms. Perkins noted the panel's comments.

The panel members were very interested in computer-assisted training in toxicology and offered to assist in the development of the program. It was noted that many HBCUs are presently involved in summer programs and projects that are similar to this effort. In closing, Ms. Perkins reminded the panel members to feel free to contact here with any suggestions or questions about the program.

Summary of Evaluation Report Presented at the May TIOP Panel Meeting by Dr, Saundra Y. McGuire

The goal of the evaluation is to access the effectiveness and overall impact of the National Library of Medicine's Toxicology Information Outreach Project on the nine HBCUs parcticipating in the project. The effectiveness of the project is judged in relation to the stated NLM goal of the project - To strengthen the capacity of HBCU; in the use of the toxicological, environmental, and occupational information resources developed at NLM.

The seven major objectives of the evaluation are:

1. To document implementation strategies, user populations and project activities at each pilot HBCU site.
2. To determine which strategies and activities result in the most effective use of project resources and materials.
3. To determine the effectiveness of the training and access tools in utilizing the NLM databases.
4. To determine the impact of the project on the curricula of the parcticipating HBCUs.
5. To determine how the resources are being utilized by the surrounding community.
6. To identify mechanisms by which the project can be strengthened at eh parcticipating HBCUs.
7. To determine how the project activities might be institutionalized after the pilot period.

The evaluation activities included interviews with project coordinators, interviews with users of the NLM resources, questionnaires completed by resource users and project coordinators, and site visits at four of the HBCUs parcticipating in the project. The site visits were conducted at Howard University College of Medicine, Xavier University College of Pharmacy, Texas Southern University College of Pharmacy and Health Sciences, and the Morehouse School of Medicine.

The findings of the evaluation study were summarized in six categories.

1. The training provided to HBCU personally by Oak Ridge Associated Universities was judged by the trainees to be excellent. The trainees included librarians and science faculty members for the HBCUs.
2. The training sessions provided by HBCU librarians and faculty at their respective institutions included seminars, short courses, workshops, and one-on-one individual sessions. The persons receiving training at the HBCUs included undergraduate, graduate, and professional students, faculty members, researchers, library staff, hospital house staff, and community health professionals. The training facilities at the HBCUs ranged from fully equipped computer laboratories with networked computers to seminar rooms in which a workstation could be placed.for purposes of the training. The majority of individuals trained by the HBCU trainers reported that the level of training they received was sufficient to allow them to utilize the resources. However, few of the users had worked through the microcomputer-based LEARN tutorials developed and provided by NLM.
3. The resources are utilized by the same wide variety of individuals at eh HBCUs. Users include students, faculty, staff, librarians, physicians, hospital house staff, community physicians, pharmacists, and other health professionals. The resources are used in the preparation of research proposals, development of papers for publication, preparation of research reports, and in diagnosing patient ill-uses by health professions. The databases utilized most frequently are MEDLINE, CHEMLINE, CHEMID, TOXLINE, TOXLIT, HSDB, and RTECS.
4. TIOP has significantly impacted the curriculum at the nine HBCUs involved in the project. The resources are introduced during professional school fall orientation sessions and in regular curricular offerings such as courses in 'Computers in Medicine" and toxicology courses. Undergraduate students are introduced to the resources in research programs such as the Minority Access to Research Careers (MARC) and the Minority Biomedical Research Support (MBRS) programs.
5. The institutional impact of the project has been substantial. Faculty members are freed from the constraints of relying on medicated searches by librarians, are introduced to new databases with which they were unaware prior to the implementation of TIOP, have improved their ability to prepare competitive proposals to funding sources, and can more easily update their curricular offerings to include the latest information. Students at the HBCUs are introduced to on-line searching, become excited about the research process, and are exposed to new technologies in information acquisition and processing. Research process, and exposed to new technologies in information acquisition and processing. Researchers report that TIOP has increased their productivity and improved their ability to produce quality publications. Institutional representatives report that the project has allowed them to improve the institutional infrastructure, increased their competitiveness for acquiring new faculty members, and has improved their interaction with the communities in which the institution is located.
6. The outreach activities engaged in by the parcticipating HBCUs has involved area health professionals, other colleges and/or junior colleges in the area, and precollege students.

Dr. McGuire reported the major strengths and weaknesses of TIOP as follows:
Strengths

1. The provision of the HBCUs with resources that would be otherwise unavailable.
2. The strengthening of the ability of the HBCUs to educate students in the areas of conducting research and in accessing information.
3. An increase in the competitiveness of researchers at the HBCUs in the grant acquisition process.
4. The provision of a mechanism for more outreach activities for HBCUs.

Weaknesses

1. An increase in the workload of already overworked HBCU faculty members with no provision for release time.
2. No formal mechanism for HBCU coordinators and/or users to exchange information on a regular, on-

going basis to discuss project activities, problems, etc.

Recommendations to HBCUs:

1. Establish a users group for individuals who utilize the NLM resources or want to begin using them.
2. Publicize the availability and usages of the NLM resources in school newsletters and other publications.
3. Formally institute the LEARN tutorials as part of the training process at the institution.
4. Actively seek the involvement of departments other than those directly involved with eh project implementation.
5. Establish additional access sites other than the one at which the workstation is located.
6. Include funding for on-line searching in all funding proposals submitted.

Recommendations to NLM:

1. Provide some amount of funding for release time for the project coordinators.
2. Provide for additional advanced training sessions for persons who have received the initial training at Oak Ridge.
3. Provide some funding for mini-grants for which institutions may apply if there are a small need that, if met, would significantly improve the effectiveness of the project at the site.
4. Continue the support to the parcticipating institutions for at least one additional year.
5. Allow the workstations to remain at the HBCUs after the project period has ended.

Dr. McGuire concluded her report with acknowledgements to Dr. Melvin Spann, Chief of the Biomedical Information Services Branch of NLM and the administrators, faculty, students, and the HBCUs parcticipating in the evaluation study.

Lower Mississippi Delta Project

Dr. Elliot Siegel
Health Information Programs at NLM
Dr. Elliot Siegel, Associate Director of Health Information Programs Development for NLM, discussed the status of the Lower Mississippi Delta Project, which was developed by the late Dr. Charles Walker to improve access to health information in the Delta region. Dr. Siegel posed the question, "What can we do to get this project rolling again?" He suggested that first, a needs assessment should be performed, and second, organizations that could work with NLM on the project need to be identified. Dr. Siegel informed the panel that NLM has been working with the Southern Institute of Children and Families to host a series of presentations and discussion sessions in southern states in order to find ways to link NLM to health problems existing in the states. These sessions will focus on determining strategies that will effectively establish an information link between NLM and health professionals who serve children and pregnant women in southern underserved areas.

Additionally, these sessions will consider the potential for establishing information links between NLM and research staff who advise policymakers on issues related to children and pregnant women.

HBCU Experience - Current Status
The nine HBCUs parcticipating in this pilot project have reported continued success. As evidenced by each report presented at the meeting, each school has continued to grow as development and implementation of the NLM resources have been used. Strong links have been established between NLM and these HBCUs as more students and faculty have been introduced to the advantages of the NLM resource opportunities.The following points of progress were noted:

- Support from school administrations has increased.
- Faculty and staff use of NLM resources for grant and proposal writing has increased. Some schools reported success in obtaining recent funding due to use of NLM resources when preparing grants or proposals.
- Development and implementation of workshops, seminars, and one-on-one training have continued to be successful.
- Some schools have created additional workstation sites for increased usage and availability.
- Using Grateful Med as an introduction to the NLM database has been successful.
- Curriculum development by integrating NLM resources into new and existing courses has been successful. NLM resources are being used in a variety of courses including basic biology, chemistry, drug information, and advanced toxicology, as well as courses in medicine, dentistry, pharmacology, and environmental sciences.
- A high percentage of the schools reported success in developing and implementing precollege programs that integrate the NLM resources into summer programs for high school students Summer programs were also established for undergraduates, first year medical students, and local high school teachers in 1993.
- Schools reported that newsletters, flyers, and brochures used as course announcements have been helpful in creating an awareness of NLM resources both on campus and within the community.
- Most schools reported that faculty members have noticed continued success in integrating NLM resources into class assignments and projects.
- Due to their use of NLM resources, some HBCUs have successfully sought and received additional sources of financial support to assist in purchasing materials, hardware, and software, and in offering extended training for faculty, staff, and students.

Conclusion

As evidenced by the reports presented at this third TIOP meeting, the NLM efforts have been effective and timely; therefore, the original intent of this project has been achieved. By establishing links with HBCUs, NLM has improved the ability of HBCUs to train medical and other health professionals in the use of NLM's toxicological, environmental, and occupational information resources. The panel members were proud that they met their stated goal, but continued to look ahead to the work still to be done. They concluded that this meeting had better prepared them to reach solutions in their own educational environments.

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